STUDY OF PALEOGEOGRAPHIC FEATURES OF THE NORTHERN PART OF THE KARELIAN ISTHMUS DURING THE HOLOCENE

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In the conditions of modern climate change, special attention is paid to paleogeographic reconstructions, because the prediction of climate scenarios in the future is modeled on the basis of data from past eras (Kuznetsov *et al.* 2007). One of the most reliable method for reconstruction of natural conditions of the Late Pleistocene and Holocene is a complex study of bottom sediments of lakes. Climate changes causes the nature and intensity of sedimentation processes, which is reflected in the formed sedimentary sequence of bottom sediments of lakes.

The territory of the Karelian isthmus is of great interest to paleogeographers, as it is located between two large water objects and the history of their influence on the formation of the isthmus is not fully studied (Subetto, 2009). The reconstruction of natural conditions in the southern part of the Karelian Isthmus (Miettinen *et al.* 2007) has been carried out. However, the question remains about the boundaries of the flooding of the northern part of the Karelian Isthmus by Ancylus and the Littorina stages of the Baltic Sea, as well as the formation of the so-called Henijoki Strait connecting the Baltic Sea with Ladoga Lake before the Neva breakthrough.

With the aim of reconstructing the dynamics of the transgression-regressive cycles of the Baltic Sea and changing the natural conditions in the northern part of the Karelian Isthmus, the lakes were chosen at different hypsometric levels: Goluboye (11 m ASL), Mozhevelnoye (14 m ASL) and Trigorskoye (16 m ASL).

Sampling of bottom sediments was conducted in October 2017 from the platform with using russian peat corer. The bathymetry was measured in the field; the territory around lakes was detailed studied; the primary lithological description of bottom sediment columns, their packaging and transportation to the laboratory was performed.

Laboratory studies will include: analysis of the loss on ignition, diatom, geochemical, palynological, chironomidae and radiocarbon analysis. The obtained data will show the relation between organic and inorganic material, physico-chemical features and bioproductivity of lakes, the duration of sediment formation, vegetation change, average temperatures in July.

The first results of the lithological description and geochemistry will be presented at the conference.

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